

DETERMINATION OF INORGANIC IONS BY ION CHROMATOGRAPHY EPA Method 300.0 Revision 2.1					
Facility Name: _____ VELAP ID _____					
Assessor Name: _____ Analyst Name: _____ Inspection Date _____					
Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
<i>Records Examined:</i> SOP Number/ Revision/ Date _____ Analyst: _____ Sample ID: _____ Date of Sample Preparation: _____ Date of Analysis: _____					
Were QCS obtained from sources different from the calibration standards?	3.12				
Were samples collected in thoroughly cleaned glass or plastic bottles?	8.1				
When bromate, bromide, chlorate, chloride, or fluoride were analyzed were the samples held for no longer than 28 days?	8.2				
When sulfate was analyzed were the samples cooled to 4°C and held for no longer than 28 days?	8.2				
When chlorite was analyzed were the samples cooled to 4°C and analyzed immediately?	8.2				
When nitrate-N, nitrite-N, or O-phosphate-P were analyzed were samples cooled to 4°C and held for no longer than 48 hours?	8.2				
When combined nitrate/nitrite was analyzed were the samples acidified to a pH <2 with H ₂ SO ₄ and held for no longer than 28 days?	8.2				
If any samples are determined to have more than 0.5mg/L of combined nitrate/nitrite did resamplings take place to be analyzed for individual nitrate and nitrite?	8.2				
Were the shortest analyte holding times and the most rigorous analyte preservation treatments used when multiple analytes were determined in samples?	8.3				
Notes/Comments:					

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Date of Analysis: _____ Date(s) of Sample Preparation: _____ Analyst: _____

If samples that were to be analyzed for chlorite were not able to be analyzed immediately, were they purged with nitrogen or argon gas for five minutes, preserved with ethylenediamine(EDA) at a rate of 1mL EDA/ 1 Liter of sample, and held no longer than 14 days thereafter? (Only chlorite, bromate, or chlorite can be analyzed in samples subjected to this procedure, as EDA has effects on other analytes.)

8.3

Were LCRs, QCS, and MDLs determined to initially characterize instrument performance prior to performing any analyses by this method?

9.2.1

Were LCRs determined initially, every six months, or whenever a significant change in instrument response was observed or expected?

9.2.2

Did verifications of linearity consist of a blank and at least three standards and have all their data fall within $\pm 10\%$ of initial values?

9.2.2

Were QCS analyzed initially, prior to determining MDLs, and on a quarterly basis to be within $\pm 10\%$ of stated values?

9.2.3

Were MDLs established for all analytes using reagent water fortified to be two or three times the estimated instrument detection limits?

9.2.4

Were MDLs determined every six months, when new operators began work, or whenever there was a significant change in instrument performance?

9.2.4

Notes/Comments:

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Were LRBs analyzed at least once with each sample batch?	9.3.1				
Were LRBs below MDLs?	9.3.1				
Were LFBs analyzed at least once with each batch of samples and determined to have recoveries of 90-100% or be within ± 3 standard deviations of mean recovery?	9.3.3				
Did the laboratory analyze IPCs consisting of mid-range change check standards immediately following daily calibration, after every ten samples, and at the end of each run to be within $\pm 10\%$ of calibration values?	9.3.4				
Did the laboratory add a known amount of each analyte to a minimum of 10% of routine samples for LFM determinations?	9.4.1				
Were the LFM aliquots duplicate aliquots of aliquots used for sample analysis?	9.4.1				
Were LFM recoveries for Method A 80-120%, and were recoveries for Method B 75-125%? (When the fortified concentration amounts are less 25% of the background concentration amounts the LFM recoveries should not be calculated.)	9.4.1.1 9.4.3				
When the laboratory accumulated sufficient LFM recovery data, did it develop control limits from percent mean recovery and standard deviations of the mean recovery?	9.4.3				
If failures in LFM recovery occurred, were they determined to be due to matrix or solution related and not system related?	9.4.4				
Notes/Comments:					

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Were LFB duplicates analyzed at least quarterly?	9.4.8				
Did sample result measurements always fall below the highest calibration standard? (Diluting samples is permitted, and it is permissible to add three standards to the calibration curve, so that at least two standards bracket the sample analytes of interest.)	10.2				
Were the calibration curves verified each working day, when the anion eluent was changed, and after every 20 samples to be within $\pm 10\%$ of expected values?	10.4				
When samples were composed of solid materials, were they diluted 10 fold (w/w) with reagent water, mixed for ten minutes, and then filtered through a 0.45 μ membrane filter?	11.7				
Were calculations done correctly?	12.0				

Notes/Comments: